Amendments to the Claims

The Claim listing below will replace all prior versions of the Claims in the application.

Claim Listing

Claims 1-31 (Canceled).

32.   (Currently amended) A method comprising:

if an amount of data located in a first memory buffer in a local computer system associated with a remote direct memory access (RDMA) request does not exceed a maximum transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote computer system:

associating the data with a first transfer operation over the data network to the remote memory buffer in the remote <u>computer</u> system;

if the amount of data associated with the first transfer operation has not reached the maximum transfer size, associating a portion of the data otherwise to be associated with a subsequent transfer operation for the RDMA request with the first transfer operation instead of with the subsequent transfer operation, the portion of the data being located in one or more portions of one or more other memory buffers in the local computer system, the subsequent transfer operation being over the data network to the remote memory buffer in the remote computer system; and

if the amount of data located in the first memory buffer exceeds the maximum transfer size:

associating a portion of the data <u>located in the first memory buffer</u> with the first transfer operation; and

associating one or more subsequent portions of the data <u>located in the first memory buffer</u> with one or more subsequent transfer operations.

33.   (Previously presented) The method of claim 32, additionally comprising transferring the data associated with the first transfer operation.

34.   (Previously presented) The method of claim 33, additionally comprising associating a descriptor with the first transfer operation, the descriptor to specify the remote memory buffer to which the data is to be transferred and to indicate a portion of data remaining to be transferred for the RDMA request.

Claims 35-37 (Canceled).

38.   (Previously presented) The method of claim 33, additionally comprising:
        associating a descriptor with the first transfer operation, the descriptor to specify the remote memory buffer to which the data is to be transferred and to indicate a portion of data remaining to be transferred for the RDMA request; and
        transferring the data associated with the first transfer operation.

39.   (Previously presented) The method of claim 38, additionally comprising:
        associating another descriptor with each of the one or more subsequent transfer operations; and
        transferring the data associated with the one or more subsequent transfer operations.

40.   (Currently amended) An apparatus comprising:
        an RDMA (remote direct memory access) manager operable to service one or more RDMA requests, and to:
                determine if an amount of data located in a first memory buffer in a local computer system associated with an RDMA request exceeds a maximum transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote computer system; , and:

if it is determined that the amount of data located in a first memory buffer does not exceed the maximum transfer size, then associate the data with a first transfer operation over the data network to the remote memory buffer in the remote computer system; ~~and~~

if the amount of data associated with the first transfer operation has not reached the maximum transfer size, associate a portion of the data otherwise to be associated with a subsequent transfer operation data for the RDMA request with the first transfer operation instead of with the subsequent transfer operation, the portion of the data being located in one or more portions of one or more other memory buffers in the local computer system, the subsequent transfer operation being over the network to the remote ~~computer~~ memory buffer in the remote computer system; and

the RDMA manager additionally operable to:

determine if the amount of data located in the first memory buffer exceeds the maximum transfer size; and ~~, and:~~

if the amount of data located in the first memory buffer exceeds the maximum transfer size:

associate a portion of the data <u>located in the first memory buffer</u> and a descriptor with the first transfer operation, the descriptor to specify the remote memory buffer to which the data <u>located in the first memory buffer</u> is to be transferred and to indicate a portion of data <u>located in the first memory buffer</u> remaining to be transferred for the RDMA request; and

associate one or more subsequent portions of the data <u>located in the first memory buffer</u> with one or more subsequent transfer operations.

41. (Previously presented) The apparatus of claim 40, the RDMA manager additionally operable to transfer the data associated with the first transfer operation.

Claims 42-43 (cancelled).

44. (Currently amended) A system comprising:

a host fabric adapter device; and

an RDMA (remote direct memory access) manager included in a software stack of the host fabric adapter, the RDMA manager operable to service one or more RDMA requests, and to:

determine if an amount of data located in a first memory buffer in a local system associated with an RDMA request exceeds a maximum transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote system; and ~~, and:~~

if it is determined that the amount of data located in a first memory buffer does not exceed the maximum transfer size, then associate the data with a first transfer operation over the data network to the remote memory buffer in the remote system; and

if the amount of data associated with the first transfer operation has not reached the maximum transfer size, associate a portion of the data otherwise to be associated with a subsequent transfer operation for the RDMA request with the first transfer operation instead of with the subsequent transfer operation, the portion of the data being located in one or more portions of one or more other memory buffers in the local system, the subsequent transfer operation being over the data network to the remote memory buffer in the remote system; and

the RDMA manager additionally operable to:

determine if the amount of data located in the first memory buffer exceeds the maximum transfer size; and ~~, and~~

if the amount of data located in the first memory buffer exceeds the maximum transfer size:

associate a portion of the data located in the first memory buffer and a descriptor with the first transfer operation, the descriptor to specify the remote memory buffer to which the data is to be transferred and to indicate a portion of data remaining to be transferred for the RDMA request; and

associate one or more subsequent portions of the located <u>in the first memory buffer</u> with one or more subsequent transfer operations.

45.   (Previously presented) The system of claim 44, the RDMA manager additionally operable to transfer the data associated with the first transfer operation.

Claims 46-47 (cancelled).

48.   (Currently amended) Computer-readable storage medium including program instructions to be executed by a computer processor for performing the following:

if an amount of data located in a first memory buffer in a local computer system associated with a remote direct memory access (RDMA) request does not exceed a maximum transfer size for a single memory to memory transfer operation over a data network to a remote memory buffer in a remote computer system:

associating the data with a first transfer operation over the data network to the remote memory buffer in the remote <u>computer</u> system;

if the amount of data associated with the first transfer operation has not reached the maximum transfer size, associating a portion of the data otherwise to be associated with a subsequent transfer operation for the RDMA request with the first transfer operation instead of with the subsequent transfer operation, the portion of the data being located in one or more portions of one or more other memory buffers in the local system, the subsequent transfer operation being over the data network to the remote memory buffer in the remote <u>computer</u> system; and

if the amount of data located in the first memory buffer exceeds the maximum transfer size:

associating a portion of the data <u>located in the first memory buffer</u> with the first transfer operation; and

associating one or more subsequent portions of the data located in the first memory buffer with a corresponding number of one or more subsequent transfer operations.

49.   (currently amended) The computer-readable storage medium ~~article~~ of claim 48, additionally comprising instructions that result in a machine transferring the data associated with the first transfer operation.

50.   (currently amended) The computer-readable storage medium ~~article~~ of claim 49, additionally comprising instructions that result in a machine associating a descriptor with the first transfer operation.

Claims 51-53 (cancelled).

54.   (currently amended) The computer-readable storage medium ~~article~~ of claim 48, additionally comprising instructions that result in a machine:

associating a descriptor with the first transfer operation, the descriptor to specify the remote memory buffer to which the data is to be transferred and to indicate a portion of data remaining to be transferred for the RDMA request; and

transferring the data associated with the first transfer operation.

55.   (currently amended) The computer-readable storage medium ~~article~~ of claim 54, additionally comprising instructions that result in a machine:

associating a descriptor with each of the one or more subsequent transfer operations; and

transferring the data associated with the one or more subsequent transfer operations.

56.   (previously presented) The method of claim 32, wherein the RDMA request is received via a single function call, and the portion of data corresponding to an

amount of data that when added with the amount of data in the first memory buffer does not exceed the maximum transfer size.